

CLAIMS

1. Data server (40) used in a system (10) for supplying complementary data, called augmentation data, for satellite navigation signals, called user signals, said system (10) including at least one computer (20) for determining said augmentation data, which is determined from data transmitted by at least one receiver station (S01, ..., S0N) receiving navigation information sent by at least one satellite, said server (40) being characterized in that it has:
 - a first input (401) for receiving said augmentation data transmitted by said computer,
 - a first output (402) for sending said augmentation data to at least one user (U01, ..., U0K),
 - a second output (403) for retransmitting said augmentation data to said computer (20) with a predetermined time-delay relative to reception at said first input (401).
2. Server (40) according to the preceding claim, characterized in that it has a third output (404) for retransmitting at least part of said augmentation data to said computer (20) at the same time as sending said augmentation data to the user (U01, ..., U0K) via said first output (402).
3. Server (40) according to any one of the preceding claims, characterized in that it includes a second input (405) for receiving information data coming from at least one user (U01, ..., U0K).
4. Server (40) according to the preceding claim, characterized in that it includes means for particularizing said augmentation data sent via said first output (402) as a function of said information data coming from at least one user (U01, ..., U0K).
5. Server (40) according to any one of the preceding claims, characterized in that said server is assigned an available geostationary satellite identification number.
6. Server (40) according to any one of the preceding claims, characterized in that said server is assigned a virtual receiver station number.
7. Server (40) according to any one of the preceding claims, characterized in that said augmentation data is determined from data transmitted by

a plurality of receiver stations (S01, ..., S0N), said server (40) having a third input (406) for receiving data transmitted by one of said receiver stations (S01, ..., S0N).

- 5 **8.** System (10) for supplying complementary data, called augmentation data, for satellite navigation signals, called user signals, said system (10) including at least one computer (20) for determining said augmentation data, which is determined from data transmitted by at least one receiver station (S01, ..., S0N) receiving navigation information sent by at least one satellite, said system (10) being characterized in that it includes
10 at least one data server (40) according to any one of the preceding claims.
- 9.** System (100) according to the preceding claim, characterized in that it includes a plurality of computers (201, ..., 20n) for determining said augmentation data, said augmentation data server (40) including
15 means for selecting a computer from said plurality of computers (201, ..., 20n), said second output of said server retransmitting said augmentation data received from said selected computer to said plurality of computers (201, ..., 20n) with a predetermined time-delay relative to the reception of said augmentation data.
- 20 **10.** System (100) according to the preceding claim, characterized in that said augmentation data retransmitted to said plurality of computers includes an identifier of said selected computer.
- 11.** System (100) according to either claim 9 or claim 10, characterized in that said selection is repeated cyclically on each reception of said
25 augmentation data by said server.
- 12.** System (101) according to any one of claims 8 to 11, characterized in that it includes at least one active first augmentation data server (41) and one redundant second augmentation data server, said computer (20) transmitting said augmentation data to said first input of said active server, and not transmitting said augmentation data to said first input of said redundant server, and said computer (20) including means for inverting the roles of said first and second servers, said second server becoming the active server and said first server becoming the
30 redundant server.
- 35 **13.** System (101) according to the preceding claim, characterized in that

said means for reversing the roles of said first and second servers are commanded cyclically on each sending of said augmentation data.

5 **14.** System (10) according to any one of claims 8 to 13, characterized in that it includes broadcasting means (50) connected to said first output (402) of said server (40) to broadcast said augmentation data to the users (U01, ..., U0K).

15. System (10) according to the preceding claim, characterized in that said broadcasting means (50) consist of the Internet.

10 **16.** System (10) according to any one of claims 8 to 15, characterized in that it includes routing and broadcasting means (70), said augmentation data being determined from data transmitted by a plurality of receiver stations and then routed and broadcast to said computer (20) by said routing and broadcasting means, said augmentation data retransmitted by said server (40) being also routed and broadcast to said computer (20) by said routing and broadcasting means (70).

15 **17.** System according to any one of claims 8 to 16, characterized in that it includes a plurality of augmentation data servers.